17728 - Spatially Resolving Highly Ionized Channels of Lyman Continuum and Lyman Alpha Escape on 10's of Parsecs Scales In A Strongly Lensed Galaxy

Cycle: 32, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) SGASJ1110+6459-POS1	ACS/WFC	4	13-Aug-2024 14:00:35.0	yes
02	(2) SGASJ1110+6459-POS2	ACS/WFC	4	13-Aug-2024 14:00:36.0	yes
03	(3) SGASJ1110+6459-POS3	ACS/WFC	4	13-Aug-2024 14:00:37.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
10	(1) SGASJ1110+6459-POS1	ACS/WFC	3	13-Aug-2024 14:00:37.0	yes
04	(1) SGASJ1110+6459-POS1	WFC3/UVIS	4	13-Aug-2024 14:00:38.0	yes
05	(2) SGASJ1110+6459-POS2	WFC3/UVIS	4	13-Aug-2024 14:00:38.0	yes
06	(3) SGASJ1110+6459-POS3	WFC3/UVIS	4	13-Aug-2024 14:00:39.0	yes
07	(1) SGASJ1110+6459-POS1	WFC3/UVIS	4	13-Aug-2024 14:00:39.0	yes
08	(2) SGASJ1110+6459-POS2	WFC3/UVIS	4	13-Aug-2024 14:00:39.0	yes
09	(3) SGASJ1110+6459-POS3	WFC3/UVIS	4	13-Aug-2024 14:00:40.0	yes
11	(3) SGASJ1110+6459-POS3	WFC3/UVIS	5	13-Aug-2024 14:00:40.0	yes

44 Total Orbits Used

ABSTRACT

Our understanding of the EOR will be limited by our ability to directly study the physical mechanisms that regulate LyC escape in galaxies where LyC escape can be directly measured. However, revealing the physics of LyC requires resolving the relevant physical scales, which are increasingly believed to be small, i.e. on the order of the size of individual compact star clusters (~10-100 pc). This work can only be performed with detailed studies of bright, highly magnified LyC leaking systems, but currently there is only one such system known (the Sunburst Arc). We propose UV/blue HST imaging of LyC and LyA of SGAS1110, an exceptionally magnified strongly lensed galaxy at z=2.48. The proposed data will spatially resolve escaping LyC and LyA radiation down to ~30 pc scales, identifying channels of extremely low HI column density. The target galaxy has a double-peaked LyA emission profile observed from galaxy-integrated ground-based spectroscopy, as well as JWST/NIRSpec IFU spectroscopy that identifies multiple compact star forming regions with extreme ionization (O3/O2 >11 and Ne3/O2 > 1.5; implying log(U) of ~ -1). These regions have nearly identical properties to the extreme LyC leaking region in the Sunburst Arc, which is associated with a single compact star cluster, ~<10 pc in size. This program would provide the crucial missing piece (direct imaging of spatially resolved LyC and LyA escape) to use SGAS1110 as a new laboratory for understanding the relationship between ionizing photon escape and spatially resolved physical properties on the physical scales of individual star clusters, as well as role that complex galaxy and ISM geometries play in enabling LyC escape.

OBSERVING DESCRIPTION

This program will measure rest-frame Lyman Continuum (LyC; lambda < 912A) and Lyman-Alpha (lyA; rest-frame lamba = 1216A) emission from a bright, strongly lensed galaxy at z=2.481. The WFC3/UVIS F275W filter captures the LyC emission and the ACS/WFC FR423N tunable narrowband ramp filter captures the LyA emission. We note that in the event that ACS/WFC becomes decommissioned, the FR423N observations can also be performed using the FQ423M (a very narrow medium band) filter on WFC3/UVIS.

Observations in both filters are deep -- 29 orbits in F275W and 15 orbits in FR423N -- and so idividual exposures will span an entire orbit, with orbits grouped into separate visits that each consist of 3, 4 or 5 orbits to facilitate shedulability.

We will reconstruct the undersampled PSF by dithering exposures using 3-pt line, 4-pt box, or 5-pt line sub-pixel dither patterns within each visit, where the number of positions match the number of orbits in a given visit. We also adjust the main target coordinates slightly (by a few arcseconds) between visits to provide larger offsets to fill in chip defects and to fill in the WFC3/UVIS chip gap.

Our aperture selections are chosen to optimize the signal-to-noise of our primary target, which is quite small -- the three bright images of the lensed galaxy all fall within a ~7x20 arcsecond region of the sky. The primary target is the central (most magnified) image of the galaxy which covers a region on the sky ~3x9arceseconds.

For the F275W observations we use the UVIS2-C1K1C-CTE aperture, which places the target in the corner of chip 2 near the readout, thus minimizing CTE losses. The target is small enough (maximum extent ~7x20arcsec) that it will easily fall onto the detector (>~ 15 arcsec from the edge) regardless of the position angle of the observation.

For the FR423N observations we use the WFC1-IRAMP aperture, which is matched to the FR423N ramp filter being located on the inner part of the ramp filter wheel. The FOV of the monochromatic inner ramp filter region (~25x75 arcseconds). These observations will comfortably fit three bright images of the lensed galaxy (as well as the higheest priority central image that is most highly manified) within the ACS/WFC ramp filter field of view at any position angle.

Visit

Proposal 17728, NB-LyA-1 (01) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(Exposure 1 (Pattern 2, Exps 1-1 in NB-LyA-1 (01))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.2637 Line Spacing=0.1856	Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides=69.02 Center Pattern=false		(1)

Fixed Targets

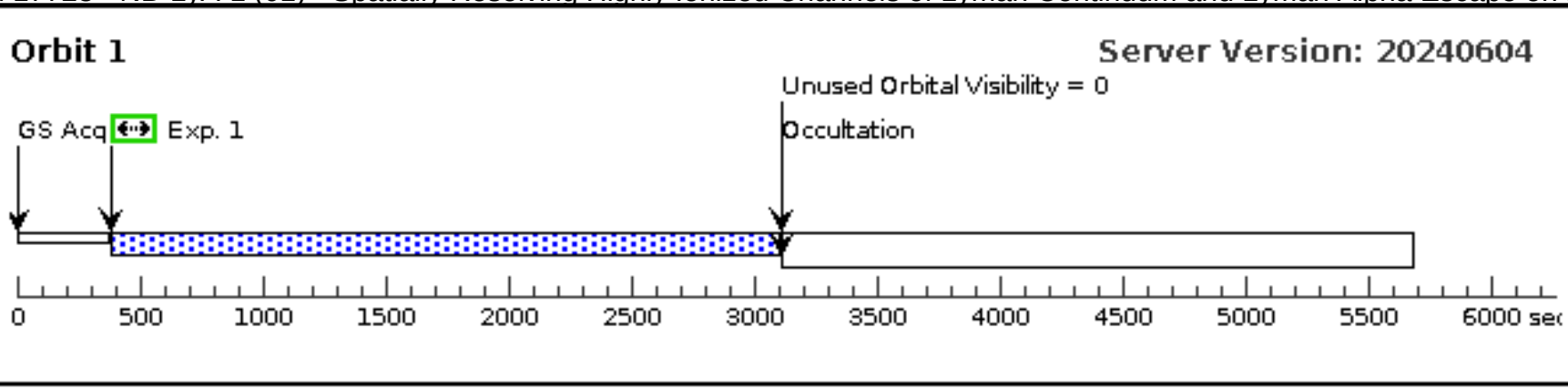
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SGASJ1110+6459-POS1 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.9996 (167.5833317d) Dec: +64 59 50.85 (64.99746d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

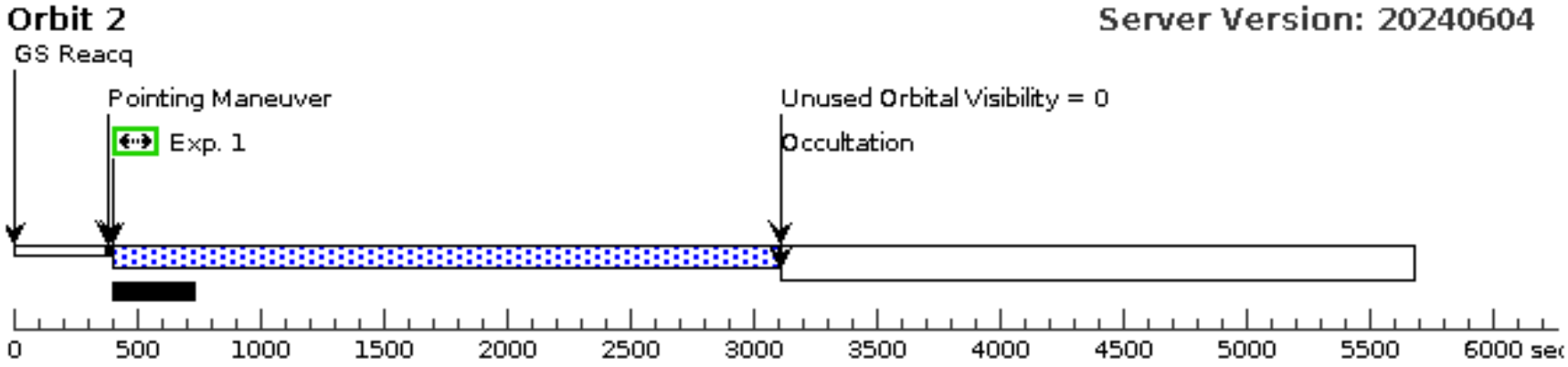
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

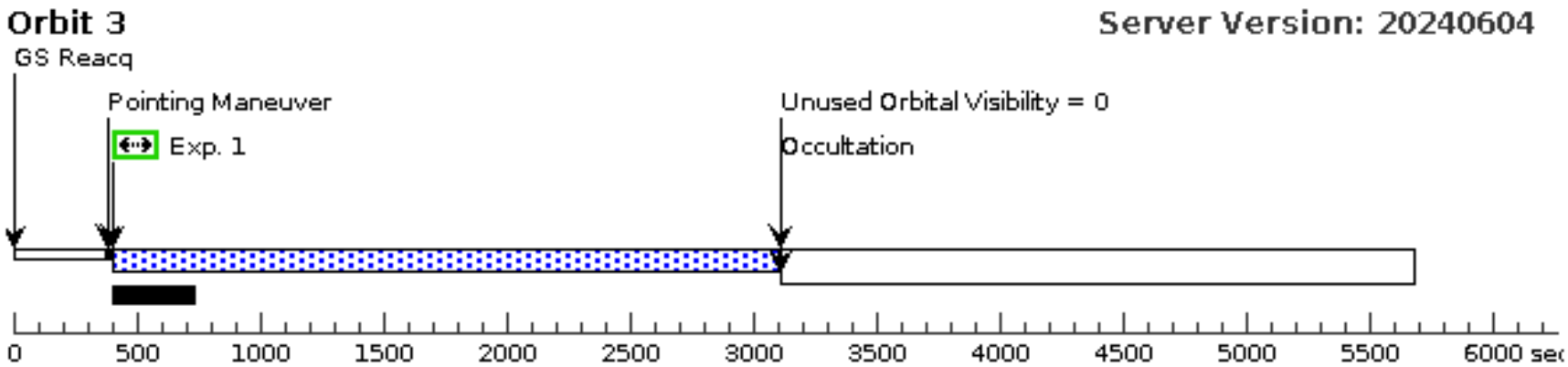
Exposures

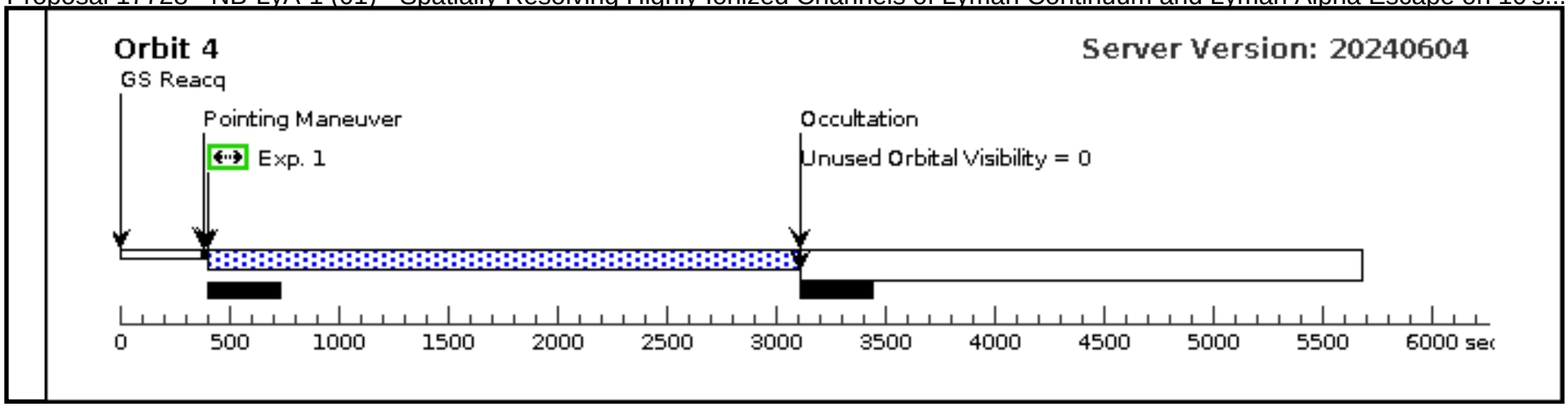
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) SGASJ1110+6459-POS1	ACS/WFC, ACCUM, WFC1-IRAMP	FR423N 4210 A			Pattern 2, Exps 1-1 in NB-LyA-1 (01) (2)	3300 Secs (10262 Secs)	
								[==>2519.0 Secs (Pattern 1)]	***[1]***
								[==>2581.0 Secs (Pattern 2)]	***[2]***
								[==>2581.0 Secs (Pattern 3)]	***[3]***
								[==>2581.0 Secs (Pattern 4)]	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Occultation
Unused Orbital Visibility = 0
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17728, NB-LyA-2 (02) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(Exposure 1 (Pattern 2, Exps 1-1 in NB-LyA-2 (02))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.2637 Line Spacing=0.1856	Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides=69.02 Center Pattern=false		(1)

Fixed Targets

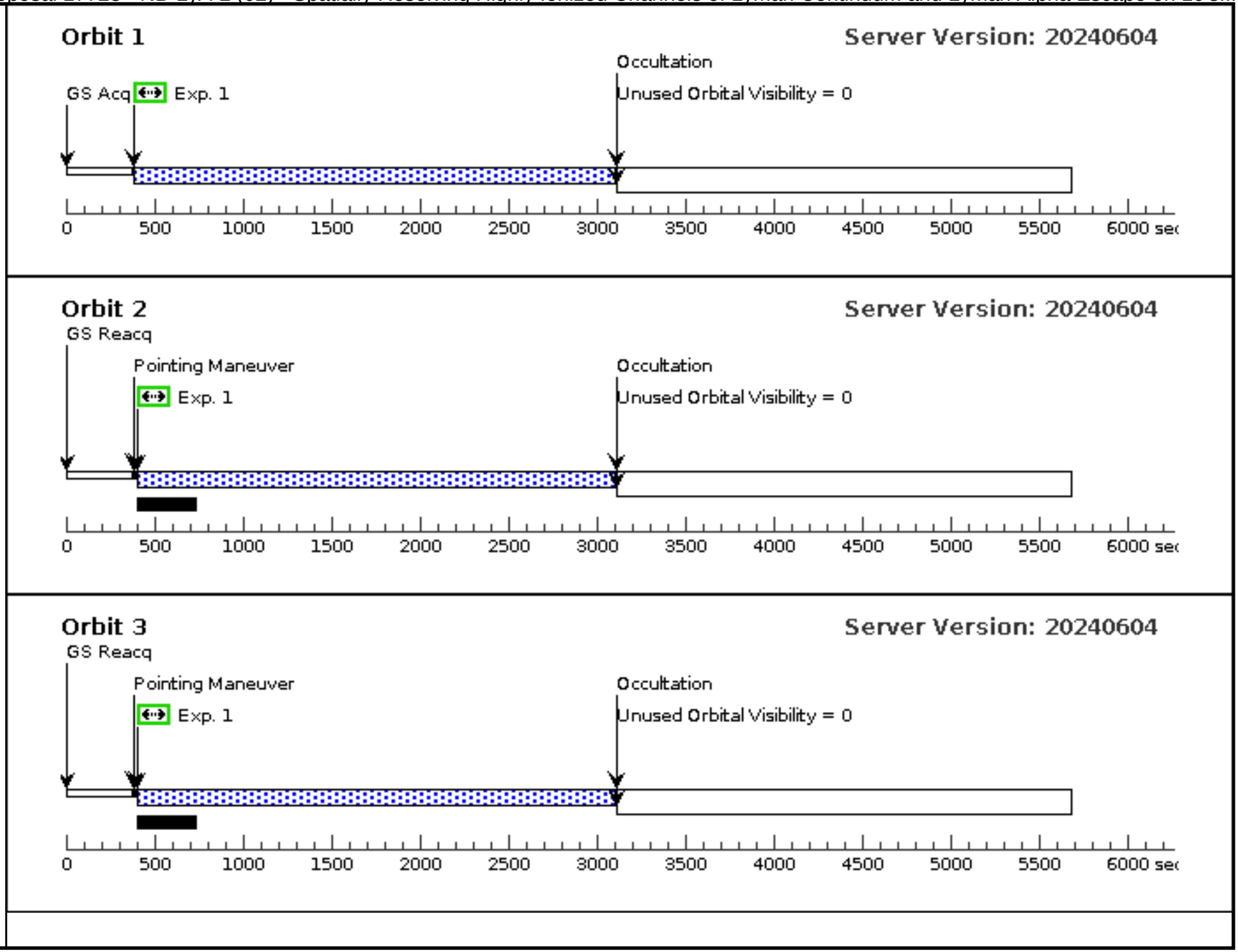
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SGASJ1110+6459-POS2 Alt Name1: SDSSJ1110+6459	RA: 11 10 20.0996 (167.5837483d) Dec: +64 59 52.35 (64.99788d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

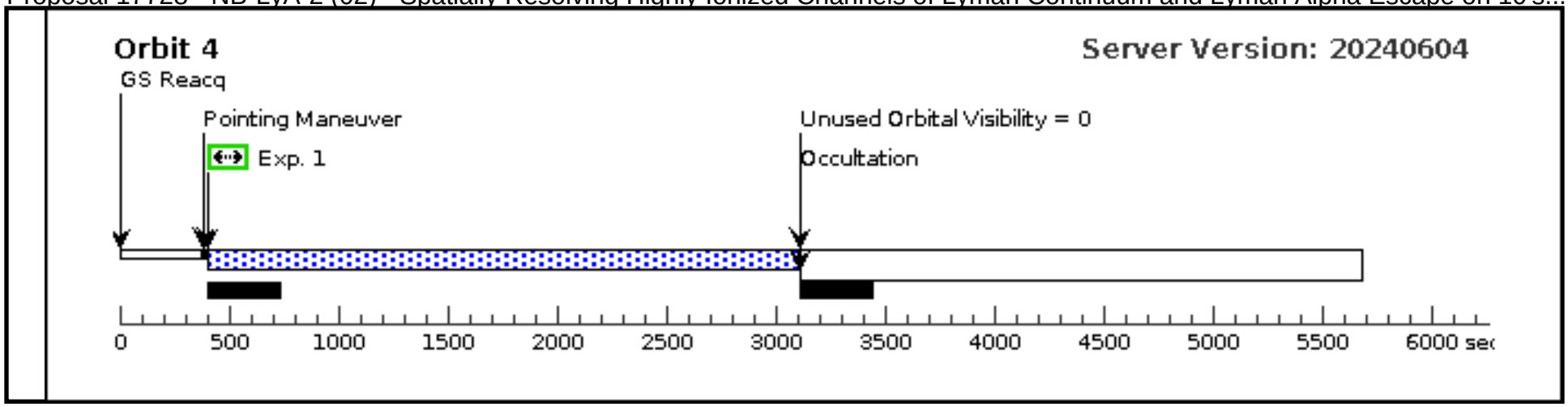
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) SGASJ1110+6459-POS2	ACS/WFC, ACCUM, WFC1-IRAMP	FR423N 4210 A			Pattern 2, Exps 1-1 in NB-LyA-2 (02) (2)	3000 Secs (10262 Secs)	
								[==>2519.0 Secs (Pattern 1)]	***[1]***
								[==>2581.0 Secs (Pattern 2)]	***[2]***
								[==>2581.0 Secs (Pattern 3)]	***[3]***
								[==>2581.0 Secs (Pattern 4)]	***[4]***

Orbit Structure




Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17728, NB-LyA-3 (03) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(Exposure 1 (Pattern 2, Exps 1-1 in NB-LyA-3 (03))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.2637 Line Spacing=0.1856	Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides=69.02 Center Pattern=false		(1)

Fixed Targets

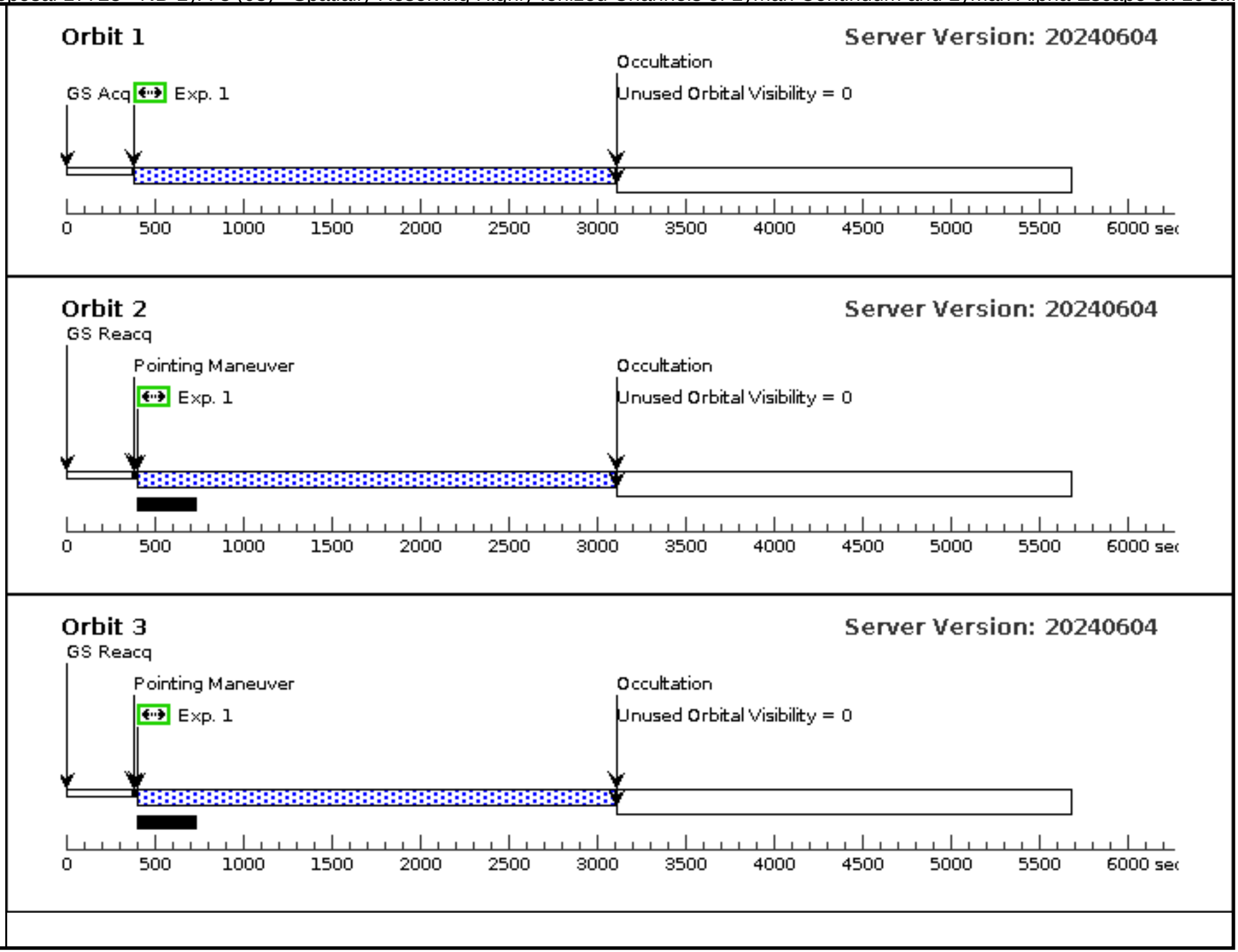
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SGASJ1110+6459-POS3 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.8996 (167.5829150d) Dec: +64 59 49.35 (64.99704d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

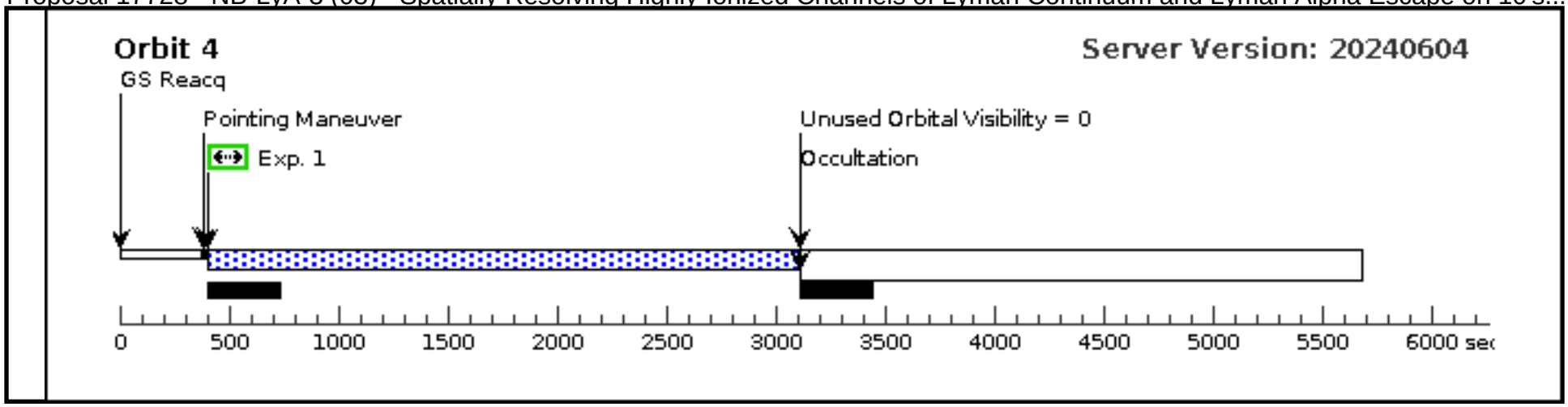
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) SGASJ1110+6459-POS3	ACS/WFC, ACCUM, WFC1-IRAMP	FR423N 4210 A			Pattern 2, Exps 1-1 in NB-LyA-3 (03) (2)	3300 Secs (10262 Secs)	
								[==>2519.0 Secs (Pattern 1)]	***[1]***
								[==>2581.0 Secs (Pattern 2)]	***[2]***
								[==>2581.0 Secs (Pattern 3)]	***[3]***
								[==>2581.0 Secs (Pattern 4)]	***[4]***

Orbit Structure




Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
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4500
5000
5500
6000 sec

Visit

Proposal 17728, NB-LyA-4 (10) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(Exposure 1 (Pattern 5, Exps 1-1 in NB-LyA-4 (10))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.187 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

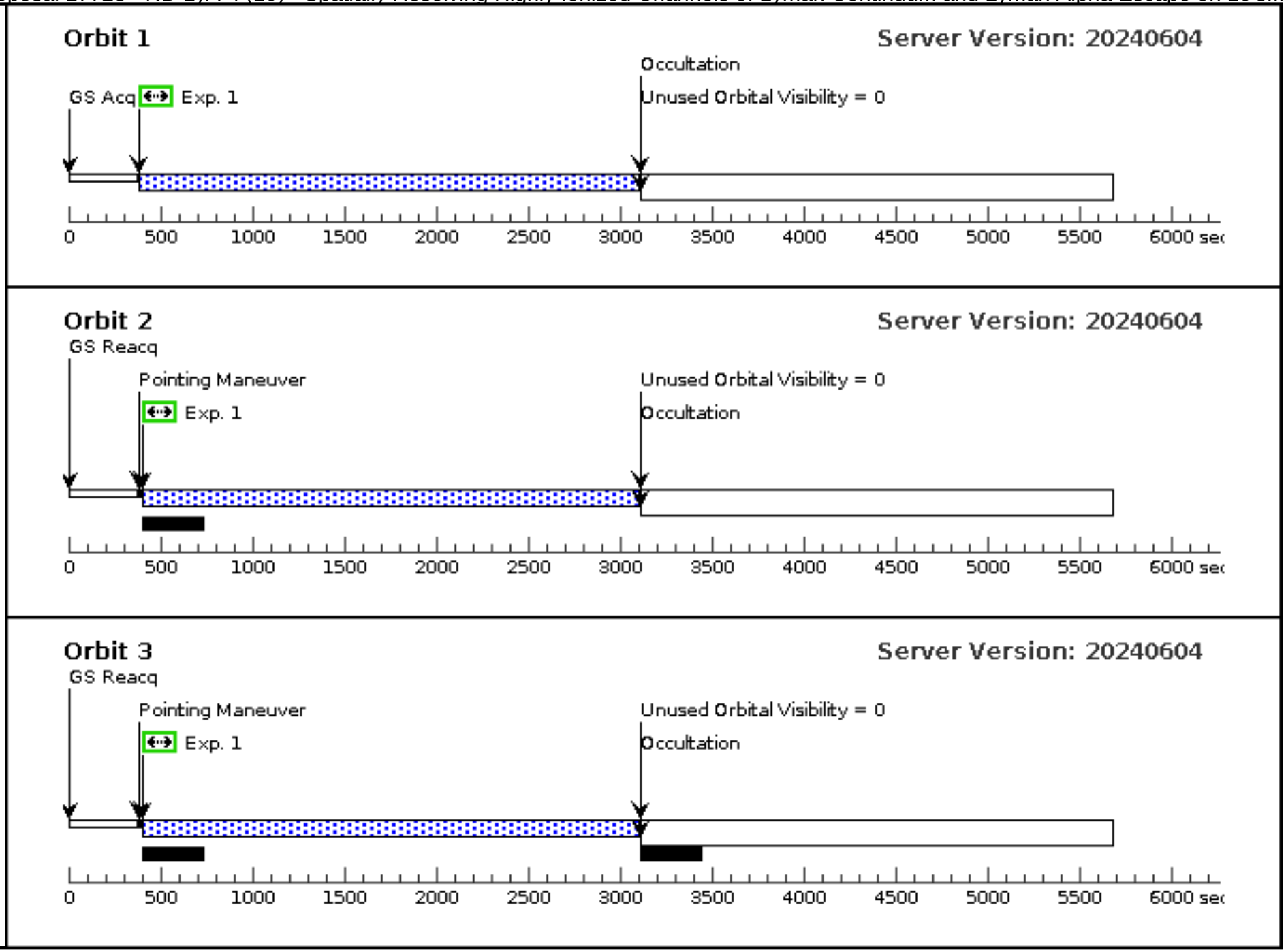
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SGASJ1110+6459-POS1 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.9996 (167.5833317d) Dec: +64 59 50.85 (64.99746d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) SGASJ1110+6459-POS1	ACS/WFC, ACCUM, WFC1-IRAMP	FR423N 4210 A			Pattern 5, Exps 1-1 in NB-LyA-4 (10) (5)	3300 Secs (7681 Secs)	
								[==>2519.0 Secs (Pattern 1)]	***[1]***
								[==>2581.0 Secs (Pattern 2)]	***[2]***
								[==>2581.0 Secs (Pattern 3)]	***[3]***

Orbit Structure



Visit

Proposal 17728, LyC-1 (04) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

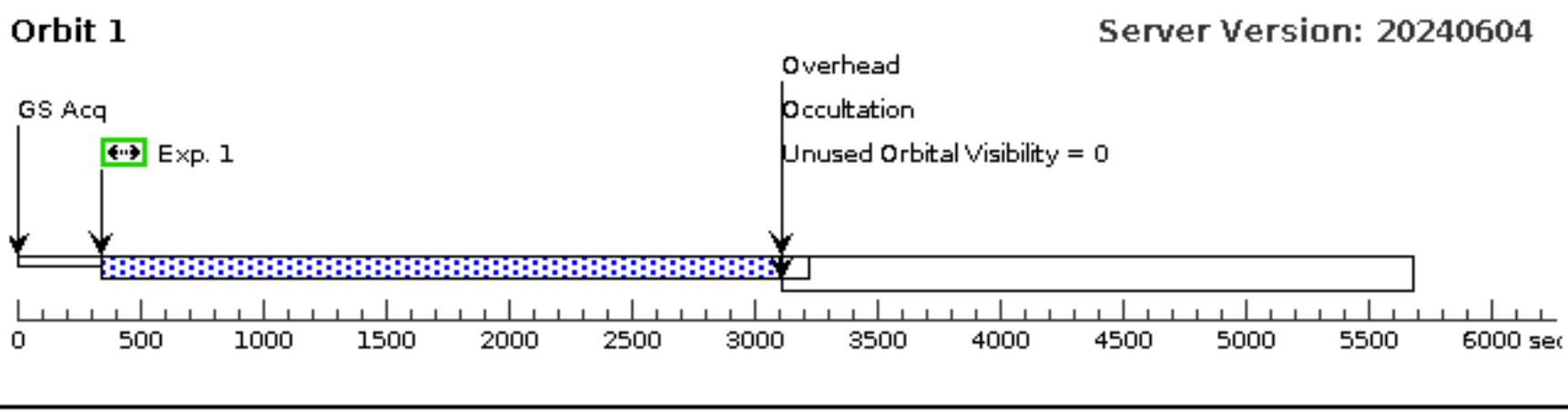
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SGASJ1110+6459-POS1 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.9996 (167.5833317d) Dec: +64 59 50.85 (64.99746d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

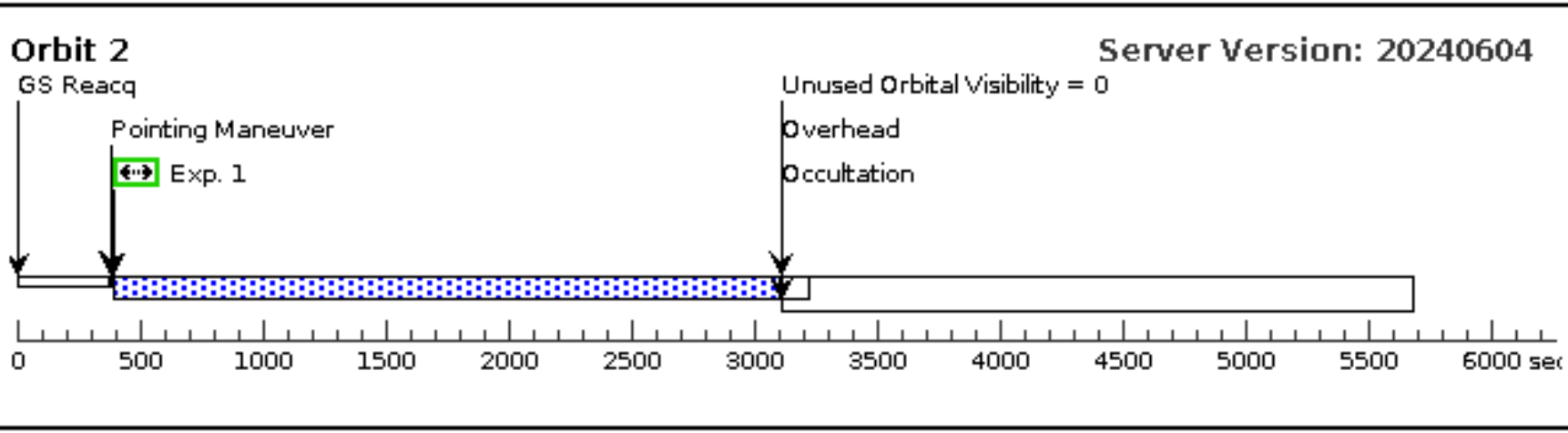
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

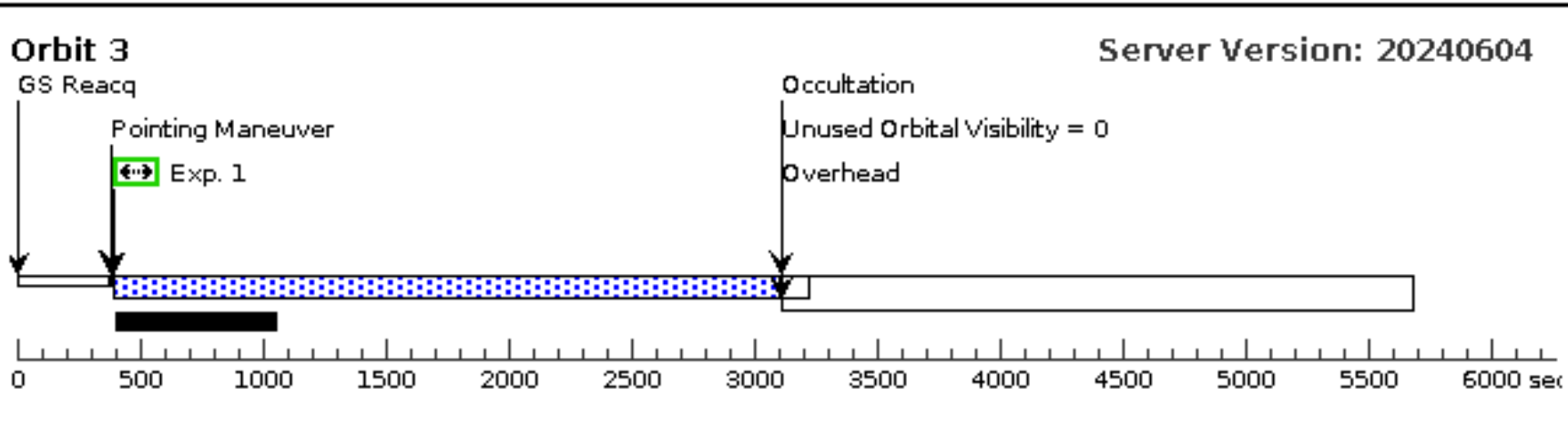
Exposures

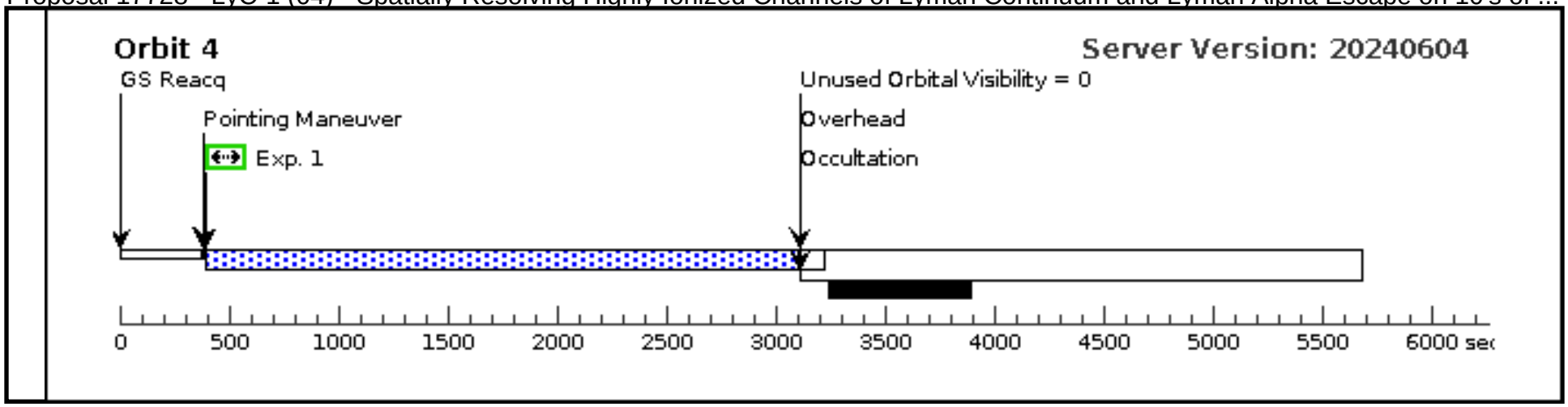
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) SGASJ1110+6459-POS1	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 3, Exps 1-1 in LyC-1 (04) (3)	3150 Secs (10864 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
								[==>2711.0 Secs (Pattern 3)]	***[3]***
								[==>2711.0 Secs (Pattern 4)]	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Unused Orbital Visibility = 0
Overhead
Occultation
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1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17728, LyC-2 (05) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SGASJ1110+6459-POS2 Alt Name1: SDSSJ1110+6459	RA: 11 10 20.0996 (167.5837483d) Dec: +64 59 52.35 (64.99788d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) SGASJ1110+6459-POS2	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 3, Exps 1-1 in LyC-2 (05) (3)	3150 Secs (10864 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
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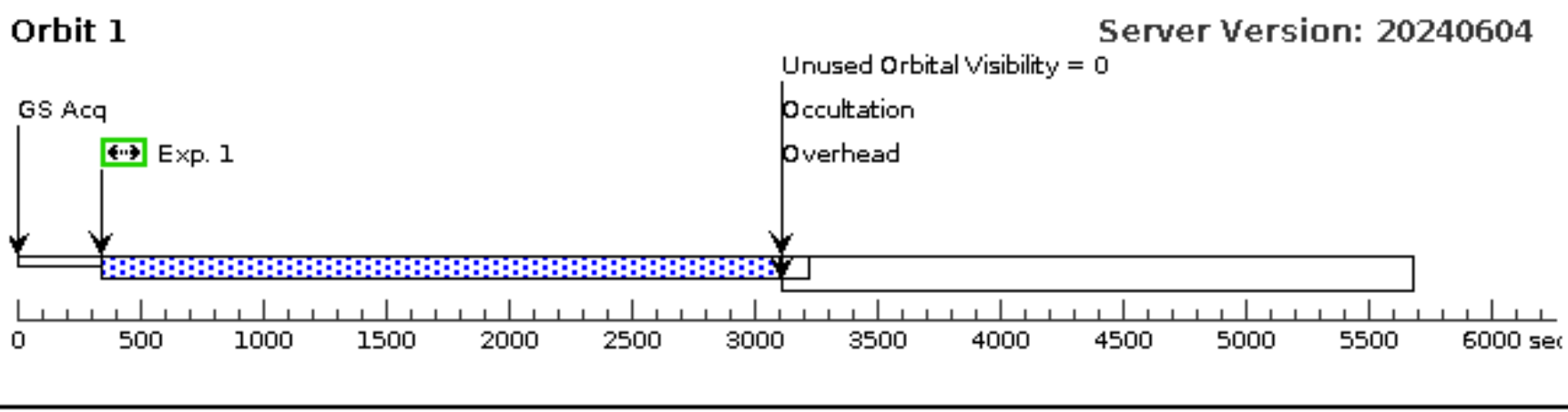
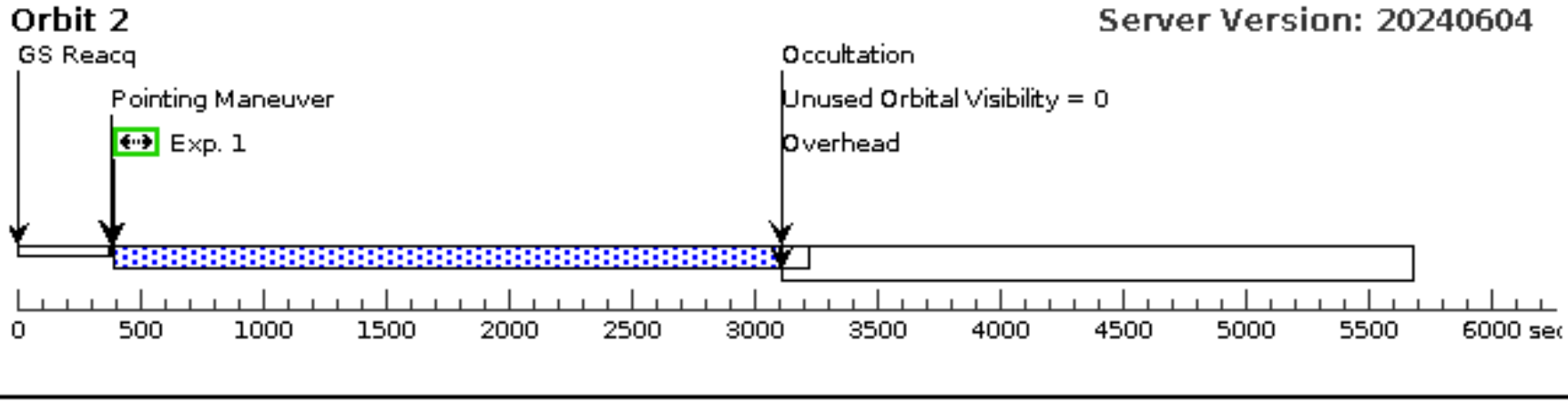
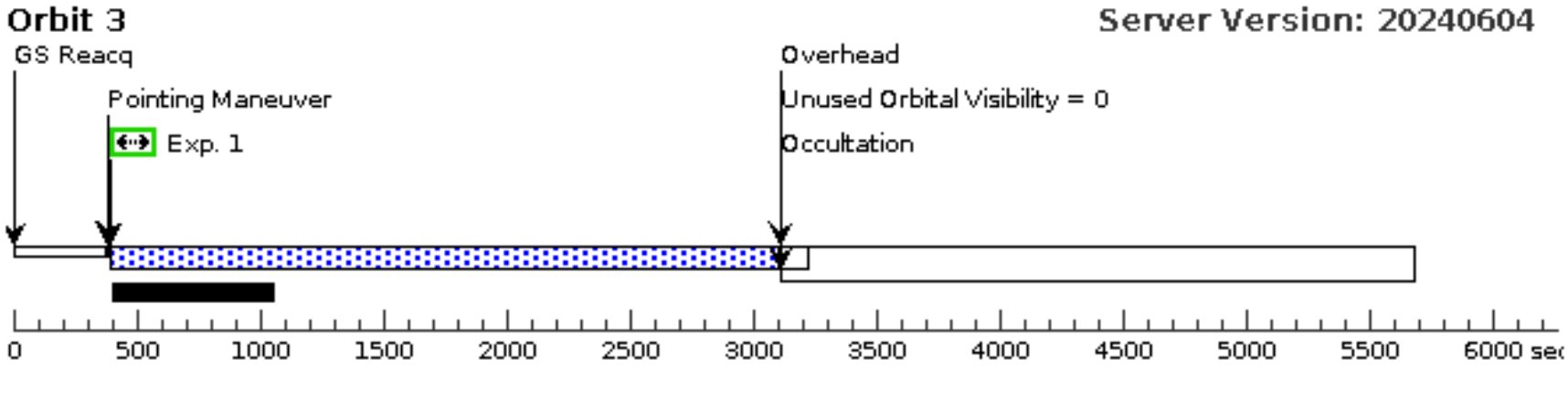
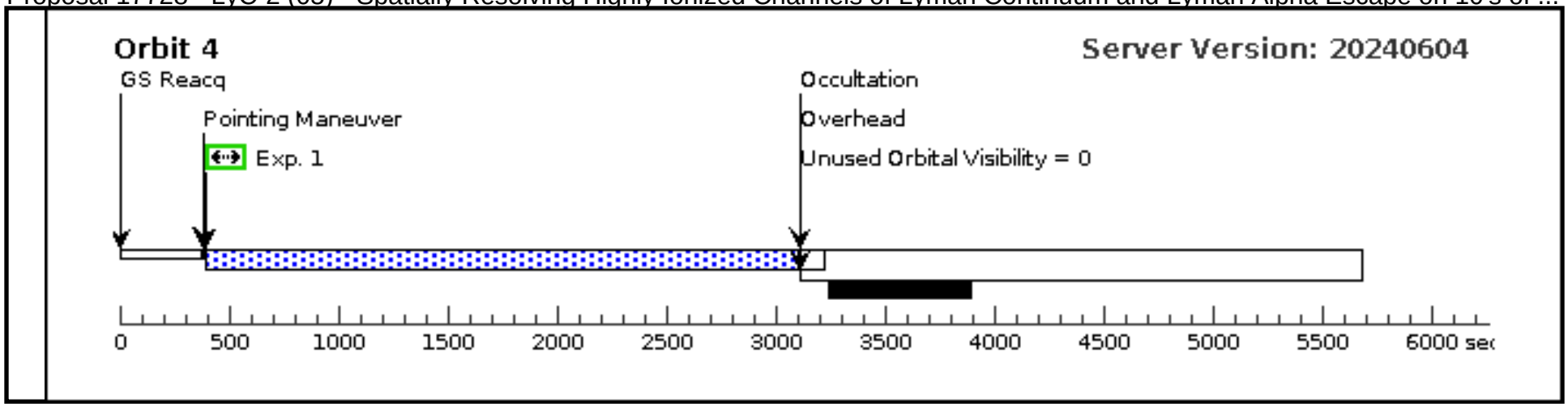
								[==>2711.0 Secs (Pattern 4)]	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Occultation
Overhead
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17728, LyC-3 (06) Tue Aug 13 18:00:41 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
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Fixed Targets

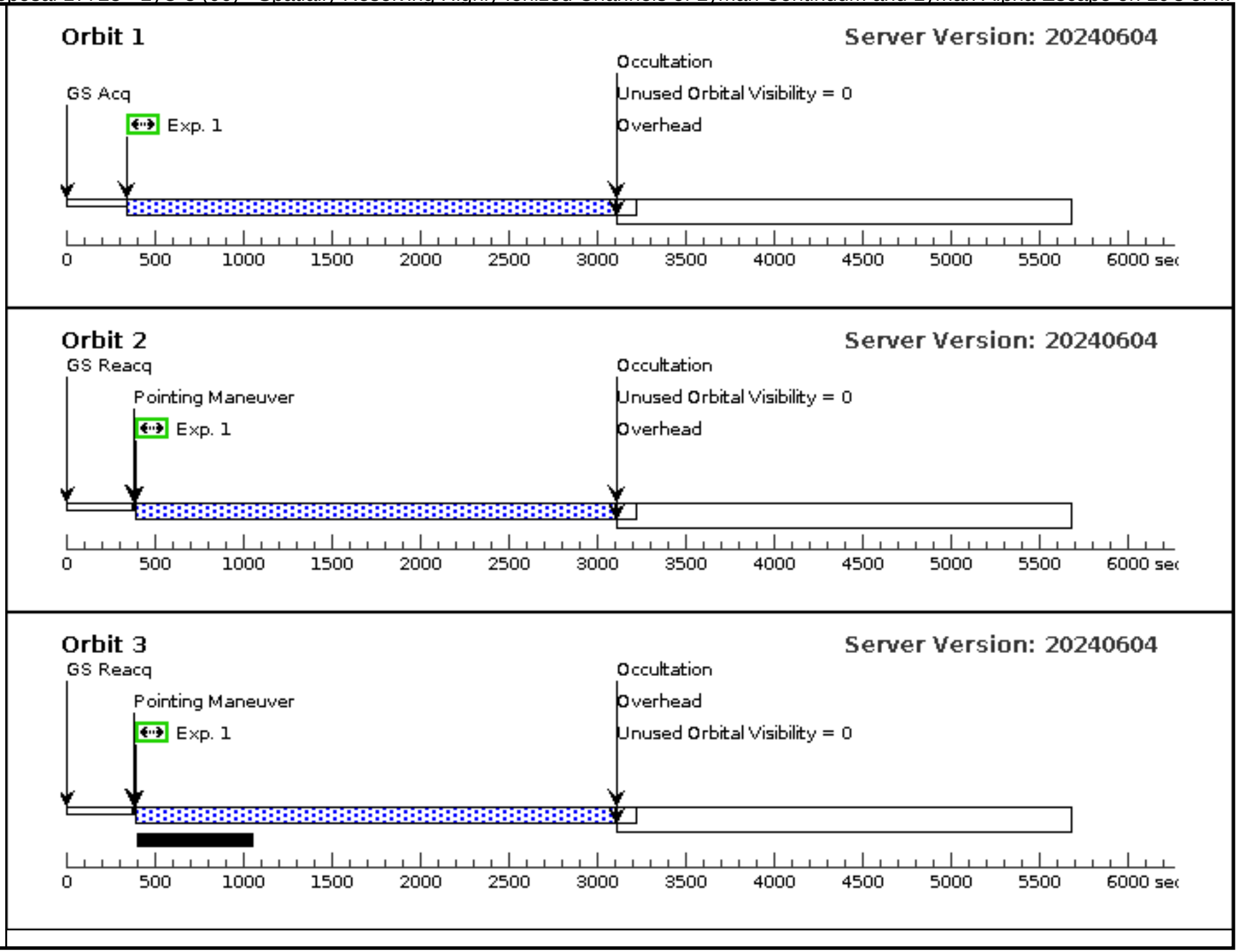
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SGASJ1110+6459-POS3 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.8996 (167.5829150d) Dec: +64 59 49.35 (64.99704d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

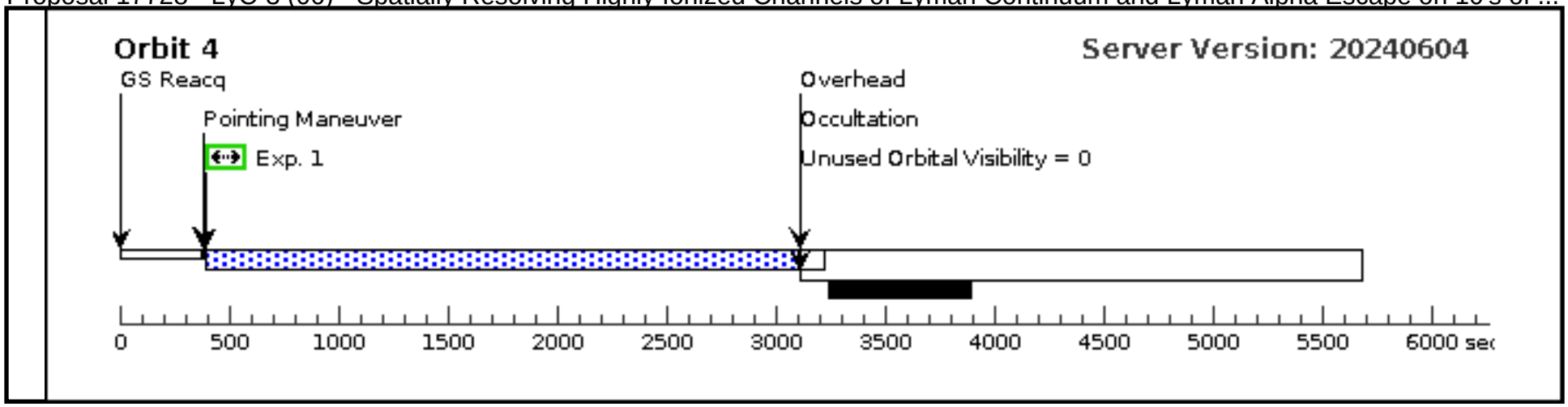
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) SGASJ1110+6459-POS3	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 3, Exps 1-1 in LyC-3 (06) (3)	3150 Secs (10864 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
								[==>2711.0 Secs (Pattern 3)]	***[3]***
								[==>2711.0 Secs (Pattern 4)]	***[4]***

Orbit Structure




Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Overhead
Occultation
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17728, LyC-4 (07) Tue Aug 13 18:00:42 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

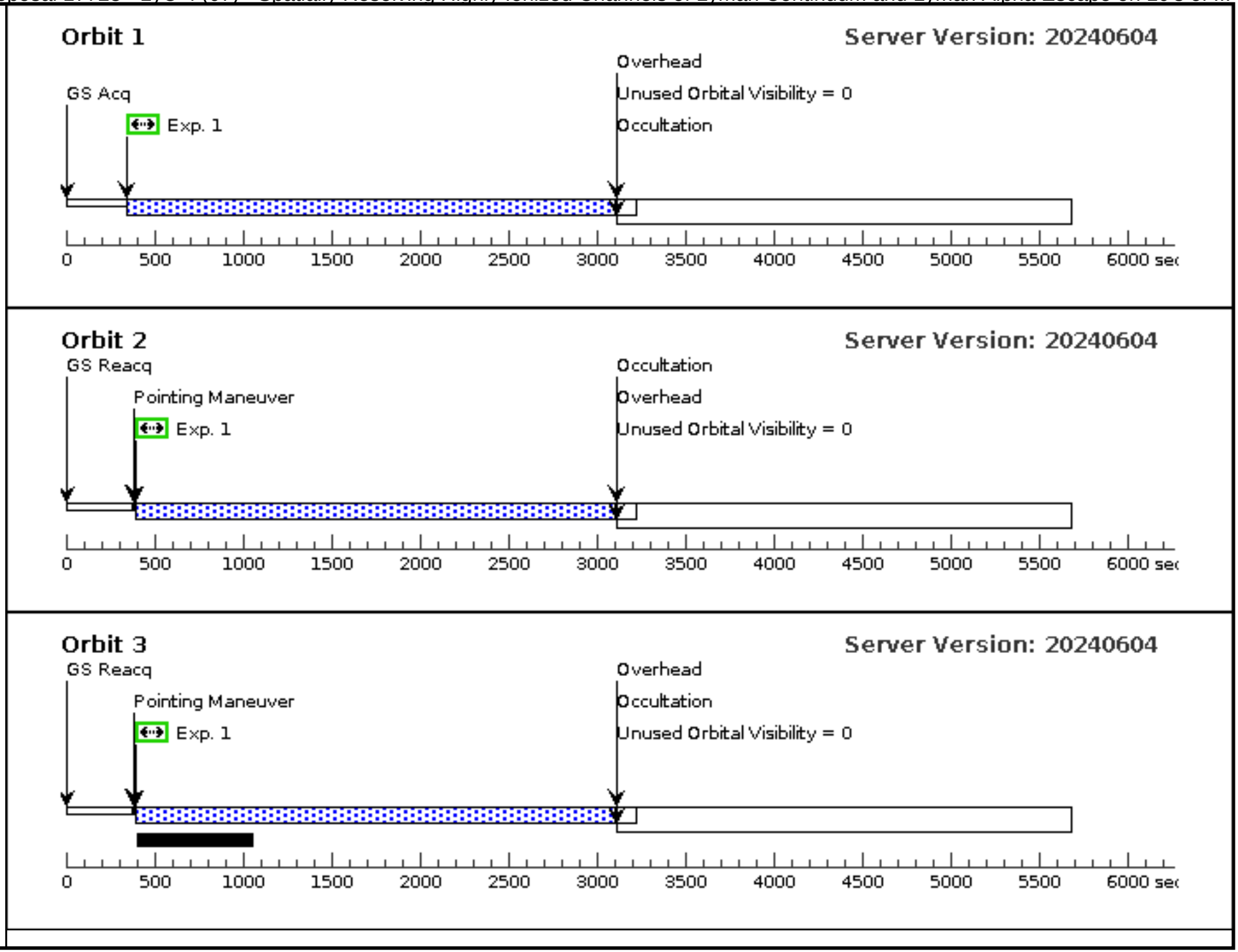
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SGASJ1110+6459-POS1 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.9996 (167.5833317d) Dec: +64 59 50.85 (64.99746d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

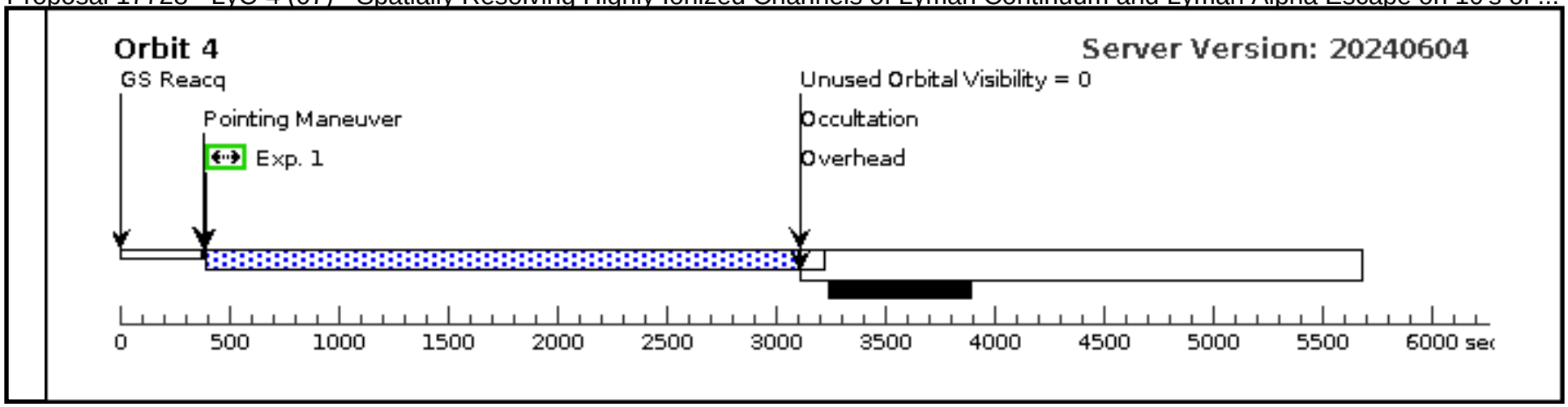
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) SGASJ1110+6459-POS1	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 3, Exps 1-1 in LyC-4 (07) (3)	3150 Secs (10864 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
								[==>2711.0 Secs (Pattern 3)]	***[3]***
								[==>2711.0 Secs (Pattern 4)]	***[4]***

Orbit Structure




Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Unused Orbital Visibility = 0
Occultation
Overhead
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5500
6000 sec

Visit

Proposal 17728, LyC-5 (08) Tue Aug 13 18:00:42 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

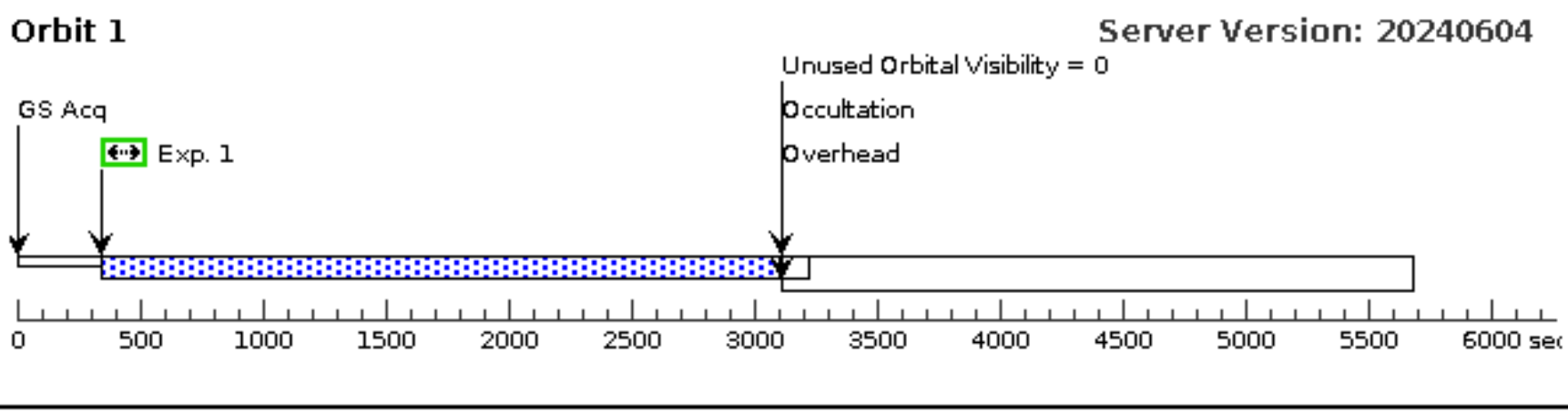
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SGASJ1110+6459-POS2 Alt Name1: SDSSJ1110+6459	RA: 11 10 20.0996 (167.5837483d) Dec: +64 59 52.35 (64.99788d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

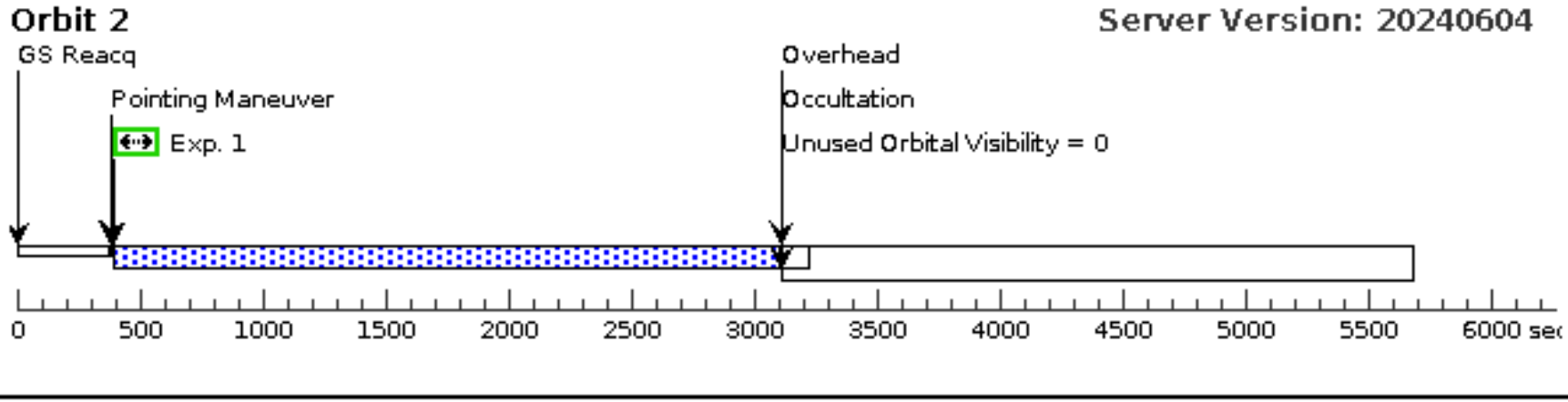
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

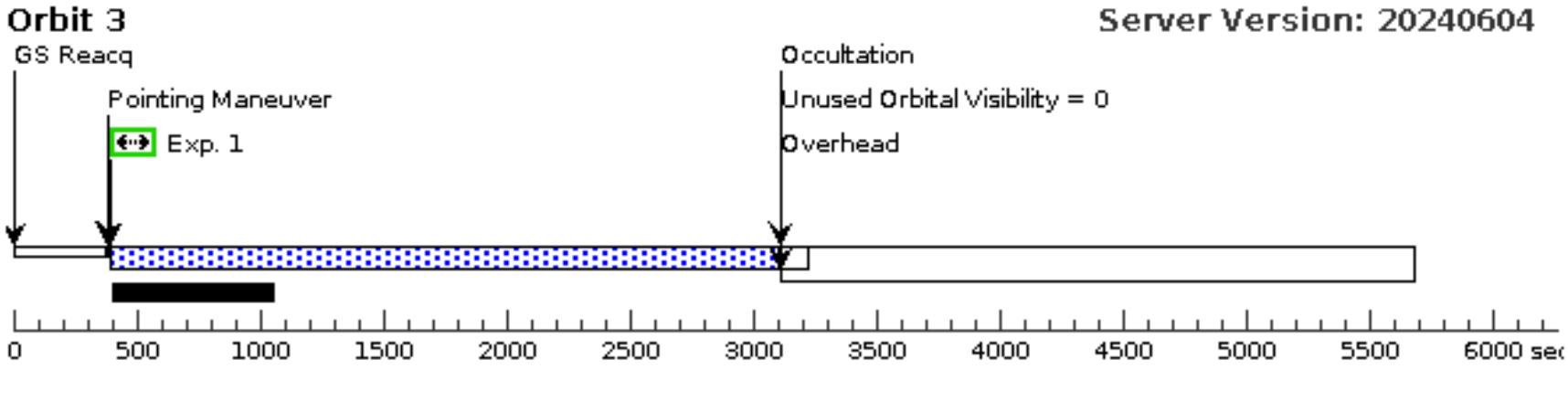
Exposures

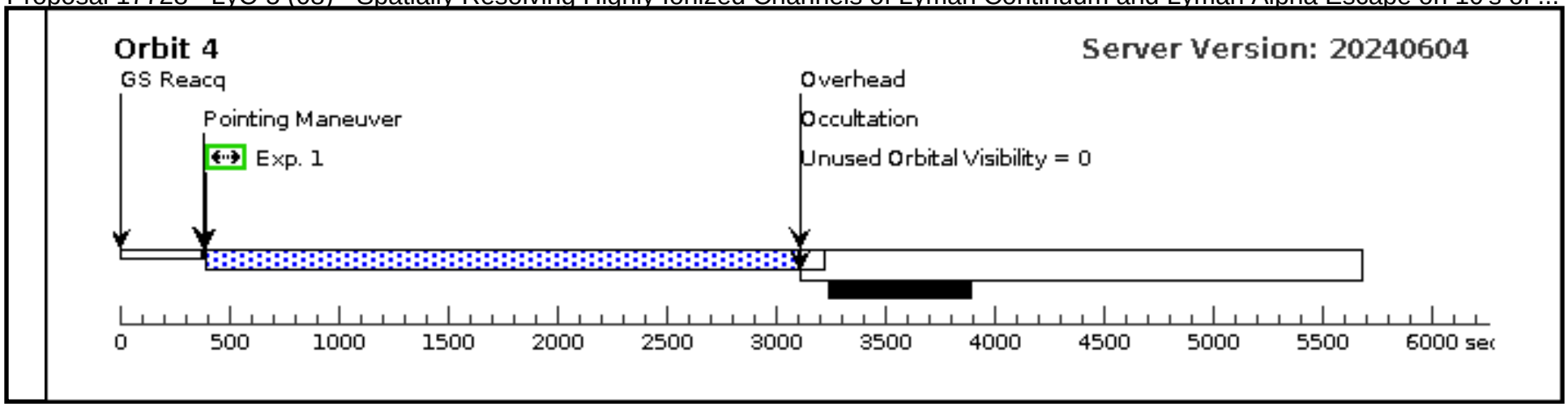
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) SGASJ1110+6459-POS2	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 3, Exps 1-1 in LyC-5 (08) (3)	3150 Secs (10864 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
								[==>2711.0 Secs (Pattern 3)]	***[3]***
								[==>2711.0 Secs (Pattern 4)]	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Overhead
Occultation
Unused Orbital Visibility = 0
0
500
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3500
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4500
5000
5500
6000 sec

Visit

Proposal 17728, LyC-6 (09) Tue Aug 13 18:00:42 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

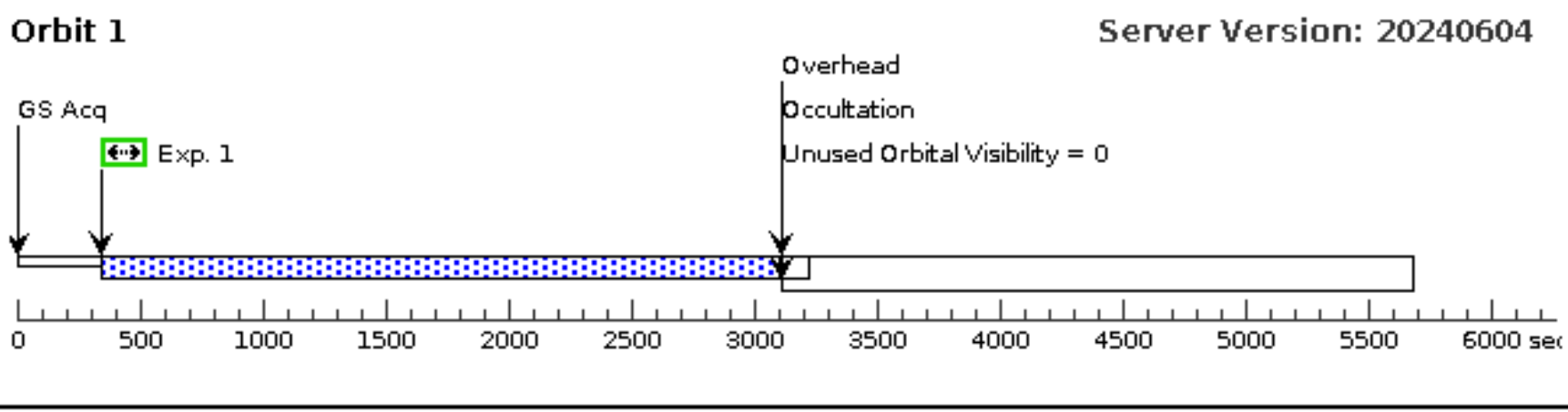
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SGASJ1110+6459-POS3 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.8996 (167.5829150d) Dec: +64 59 49.35 (64.99704d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

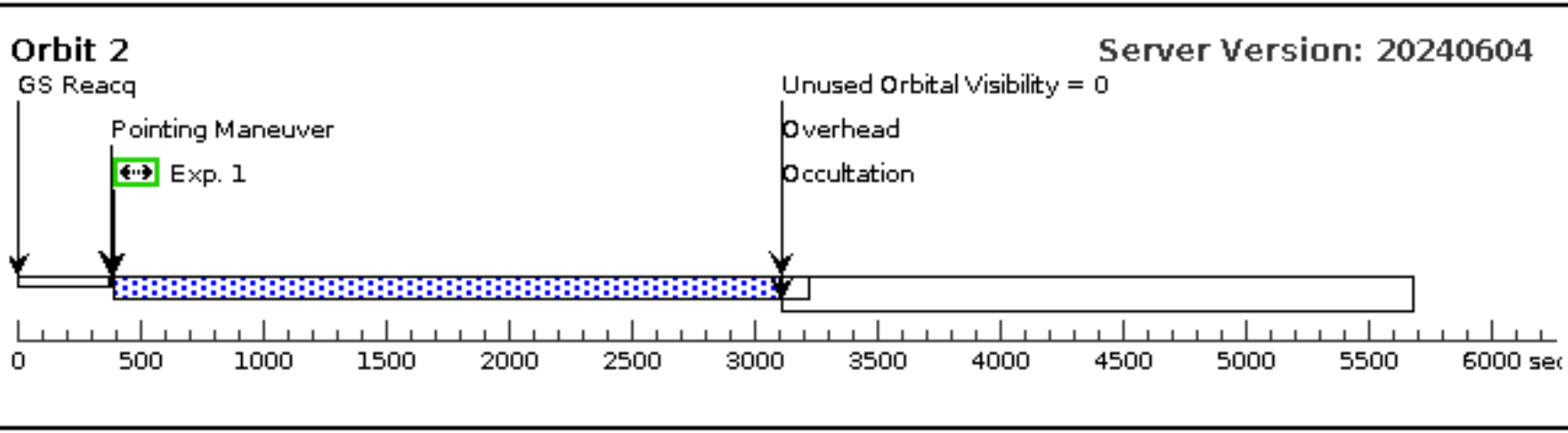
Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

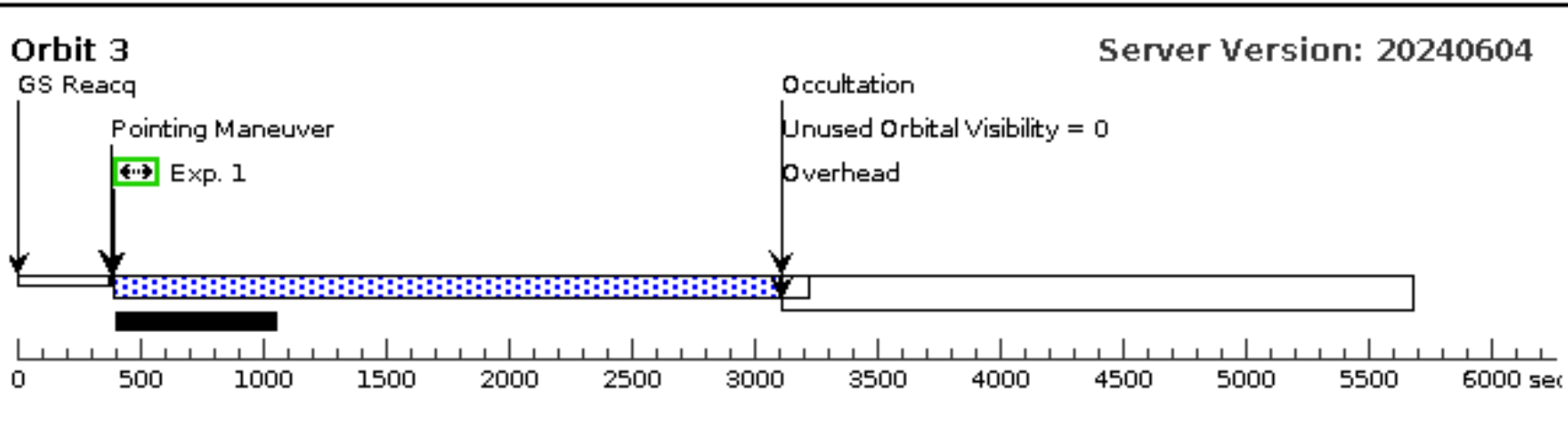
Exposures

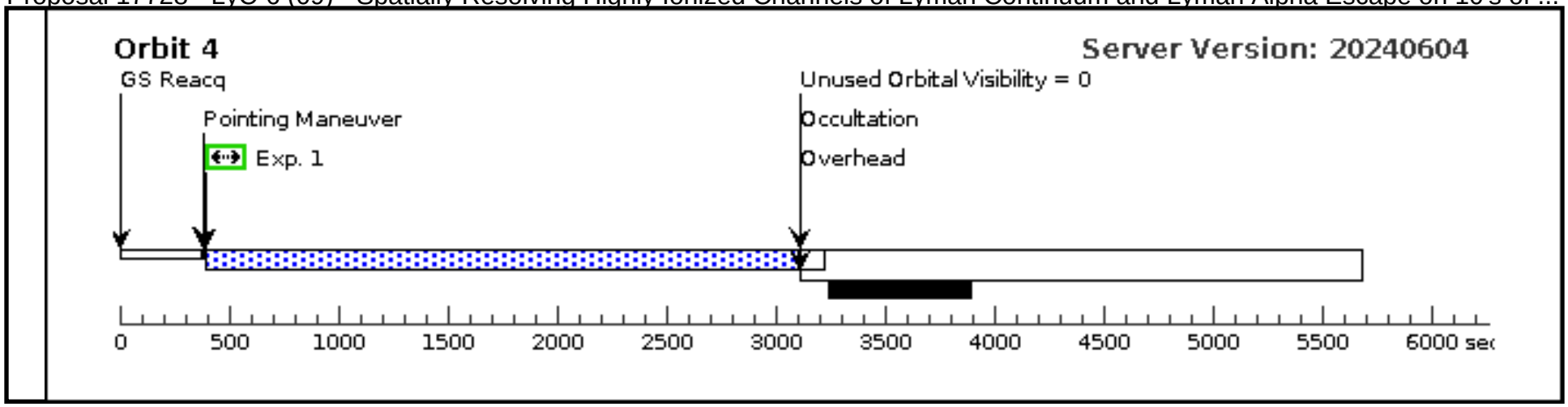
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) SGASJ1110+6459-POS3	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 3, Exps 1-1 in LyC-6 (09) (3)	3150 Secs (10864 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
								[==>2711.0 Secs (Pattern 3)]	***[3]***
								[==>2711.0 Secs (Pattern 4)]	***[4]***

Orbit Structure








Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Unused Orbital Visibility = 0
Occultation
Overhead
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6000 sec

Visit

Proposal 17728, LyC-7 (11) Tue Aug 13 18:00:42 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=5 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

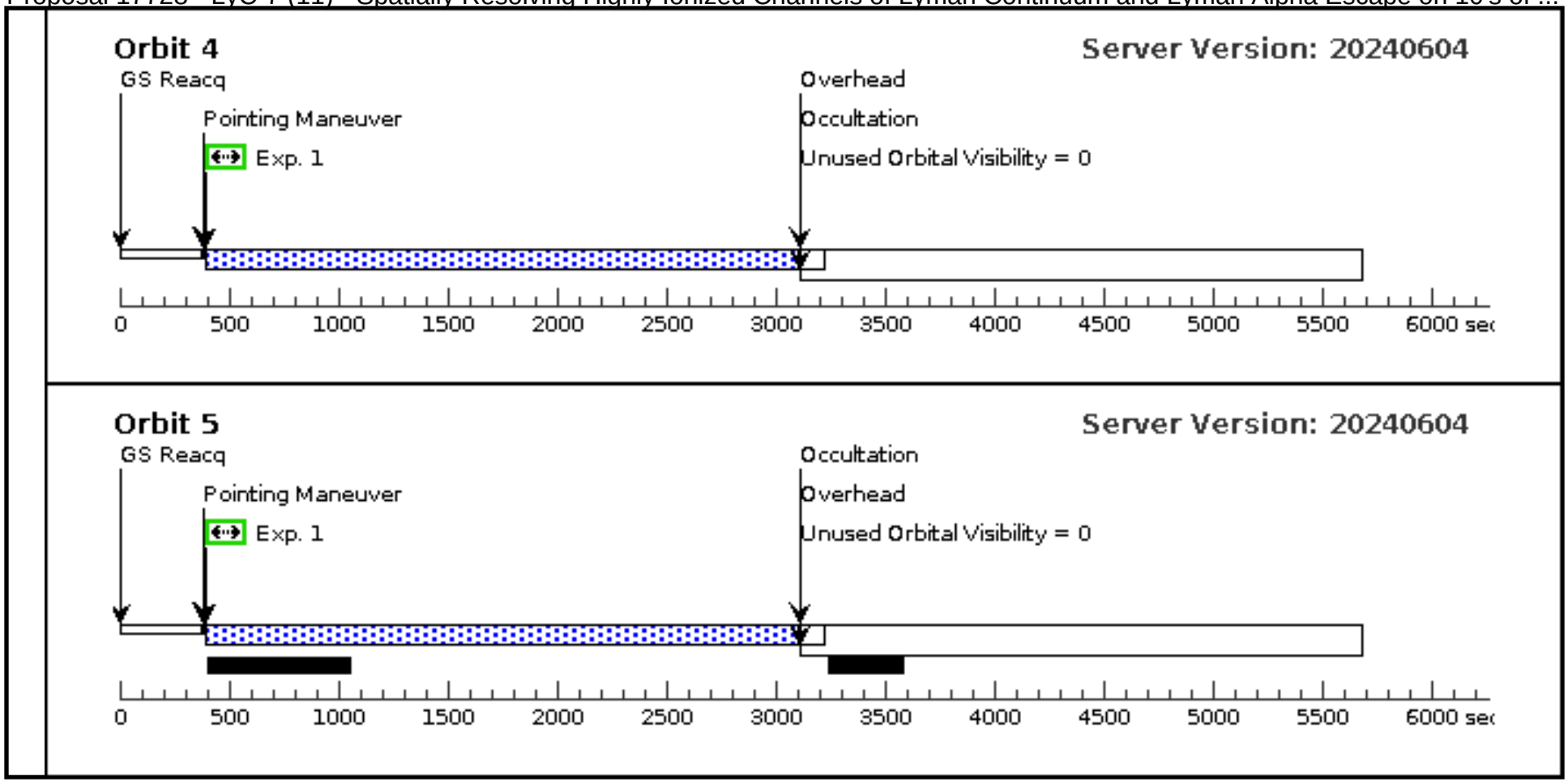
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SGASJ1110+6459-POS3 Alt Name1: SDSSJ1110+6459	RA: 11 10 19.8996 (167.5829150d) Dec: +64 59 49.35 (64.99704d) Equinox: J2000	Epoch of Position: 2000	V=26.2+/-0.1	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY, STAR FORMING REGION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) SGASJ1110+6459-POS3	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F275W	FLASH=11		Pattern 4, Exps 1-1 in LyC-7 (11) (4)	3150 Secs (13575 Secs)	
								[==>2731.0 Secs (Pattern 1)]	***[1]***
								[==>2711.0 Secs (Pattern 2)]	***[2]***
								[==>2711.0 Secs (Pattern 3)]	***[3]***
								[==>2711.0 Secs (Pattern 4)]	***[4]***
								[==>2711.0 Secs (Pattern 5)]	***[5]***

Orbit Structure


Orbit 4
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Overhead
Occultation
Unused Orbital Visibility = 0
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6000 sec
Orbit 5
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 1
Occultation
Overhead
Unused Orbital Visibility = 0
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6000 sec